

Abstract of the Disclosure

The present invention encompasses a novel approach to develop modified proteins that induce a reduced (or no) immune response (compared to an unmodified protein) in an animal, wherein one or more T cell epitope sequences present in the unmodified protein is/are replaced with one or more "deantigenized" T cell epitope sequences, which exhibit reduced or no binding to a MHC molecule (compared to the T cell epitope); thereby hindering the cellular process of immune response. The present invention provides a novel method for detecting deantigenized T cell epitopes and further reducing or eliminating immunogenicity of an otherwise immunogenic protein by substituting one or more deantigenized T cell epitope sequences for one or more T cell epitope sequences of the parent immunogenic polypeptide.